

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2009-0052

Amending Order No. R8-2006-0009, NPDES No. CA0105350
Waste Discharge and Producer/User Reclamation Requirements
for
City of Riverside
Regional Water Quality Control Plant
Riverside County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter, Board), finds that:

1. On April 21, 2006, the Regional Water Board adopted Order No. R8-2006-0009, NPDES No. CA0105350, prescribing Waste Discharge and Producer/User Reclamation Requirements for the City of Riverside Regional Water Quality Control Plant (RWQCP) for the discharge of tertiary treated wastewater to Reach 3 of the Santa Ana River and for the use of recycled water. Order No. R8-2006-0009, will expire on April 1, 2011.
2. In July 2008, and in some months following, the RWQCP exceeded the 12-month average total dissolved solids concentration in the water supply by more than 250 mg/l (Effluent Limitations and Discharge Specifications IV.A.1.c.2). The TDS effluent concentration and mass emission rate limits Effluent Limitations and Discharge Specifications IV.A.1.c.1) have not been exceeded. However, the City has noted that there is the potential for increases in TDS concentration in the potable water served in the service areas, due, in part, to decreasing importation of high TDS quality State Project Water, decreasing reliance on high TDS quality groundwater pumped from the Bunker Hill Basin, and increasing reliance over the long-term on poorer quality water pumped from part of the Riverside Basin. Given these likely increases in TDS concentration of potable supplies, there is a high likelihood that a violation may occur in the near future.
3. The Basin Plan recognizes that strict compliance with TDS limits may be difficult to achieve and it describes the regulatory approach the Regional Board uses to address such situations. The Board incorporates offset provisions in waste discharge requirements whereby Dischargers can implement an approved program to offset TDS discharges in excess of specified TDS limits, provided that the Discharger makes all reasonable efforts to improve the TDS quality of the water supply (and thereby, the wastewater). The Basin Plan also recognizes that compliance with nitrogen limits may be problematic in some situations and stipulates that offset provisions may also be applied to nitrogen discharges. These offset provisions are normally included in waste discharge requirements where there is the possibility of violation of TDS (and/or nitrogen) limitations. These offset provisions were not included in Order No. R8-2006-0009 since review of monitoring data collected over the preceding five year period indicated that the City would be able to comply with the TDS effluent limitations.

4. On July 10, 2009, the City of Riverside requested that Order No. R8-2006-0009, NPDES No. CA0105350, be amended to include the offset provisions that are specified in the Basin Plan.
5. It is appropriate to amend Order No. R8-2006-0009 to include TDS offset provisions that are specified in the Basin Plan.
6. In accordance with Water Code Section 13389, amending the waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.
7. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge requirements for the discharge and has provided them with an opportunity to submit their written views and recommendations.
8. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order No. R8-2006-0009 be amended as follows:

1. Order No. R8-2006-0009, page 10, Effluent Limitations and Discharge Specifications IV.A.1.c. with the following:
 - c. TDS Limitations - The lower of the two total dissolved solids (TDS) limits specified in (1) or (2), below, is the limit.
 - (1) The 12-month flow weighted running average TDS constituent concentration and mass emission rate shall not exceed 650 mg/L and 216,840 lbs/day¹, respectively, unless:
 - (a) The Discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that:
 - i. Discharges in excess of the TDS limits are due to the quality of water supply sources utilized in the Discharger's service area, and that all reasonable steps, as agreed upon by the Executive Officer, have been taken to ensure that the best quality supplies are obtained and utilized in the Discharger's service area; or

¹ Derived from $40 \text{ mgd} \times 8.34 \times 650 \text{ mg/L} = 216,840 \text{ lbs/day}$.

- ii. Discharges in excess of the TDS limits are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the Discharger has taken all steps to optimize chemical additions so as to minimize the increases; and

(b) The Discharger implements a plan, with the approval of the Executive Officer, to offset discharges in excess of the TDS limits. See Section VI.C.6.b, below.

(2) The 12-month flow weighted running average TDS concentration shall not exceed the 12-month flow weighted running average TDS concentration in the water supply by more than 250 mg/L, unless:

(a) The Discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that TDS discharges in excess of the 250 mg/L mineral increment are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the Discharger has taken all steps to optimize chemical additions so as to minimize the TDS increases; and

(b) The Discharger implements a plan, with the approval of the Executive Officer, to offset TDS discharges in excess of the 250 mg/L mineral increment. See Section VI.C.6.b, below.

2. Order No. R8-2006-0009, page 25, modify paragraph VI.C.6. as follows:

6. Other Special Provisions

a. TDS Offset Program

By March 31, 2010, the Discharger shall submit a proposed offset program and schedule of implementation for approval by the Regional Board Executive Officer. The proposed offset program shall include a compliance schedule that assures that offsets required to comply with effluent limitations will be implemented (i.e., the requisite offset(s) will be provided) as soon as possible but no later than March 31, 2011. Upon approval, the Discharger shall implement the offset program according to the approved schedule. The offset program shall account for TDS discharges in excess of the numeric limits specified in this Order that occur starting from August 28, 2009 and thereafter. Should any of the proposed offset mechanisms be discontinued or prove to be inadequate to provide requisite offset(s), the Discharger shall, no later than 30 days of discontinuance of any of the proposed offset program or finding of its inadequacy, propose an alternative offset program for approval by the Executive Officer. The Discharger shall implement the alternative offset program upon approval by the Executive Officer.

3. Attachment E, page 20, Section IX. - Other Monitoring Requirements, add new subsection E. as follows:

E. TDS Offset Program Monitoring and Reporting

Every quarter, the Discharger shall report the total salt removal accomplished pursuant to the offset program to demonstrate whether offset requirements are being met. The Discharger shall report quarterly a running balance of salt discharges compared to TDS removal. If offset is not occurring during the quarterly monitoring period, the quarterly report shall so state and identify when the offset will be achieved.

4. These amendments shall become effective upon the adoption of this Order.
5. All other conditions and requirements of Order No. R8-2006-0009 shall remain unchanged.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the forgoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on August 28, 2009.

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

August 28, 2009

STAFF REPORT

ITEM:

SUBJECT: Amendment of Order No. R8-2006-0009, NPDES No. CA0105350, Waste Discharge and Producer/User Reclamation Requirements for City of Riverside Regional Water Quality Control Plant, Riverside County – Order No. R8-2009-0052

DISCUSSION:

On April 21, 2006, the Regional Water Board adopted Order No. R8-2006-0009, NPDES No. CA0105350, prescribing Waste Discharge and Producer/User Reclamation Requirements for the City of Riverside Regional Water Quality Control Plant (RWQCP) for the discharge of tertiary treated wastewater to Reach 3 of the Santa Ana River and for the use of recycled water.

The RWQCP is operated by the City of Riverside Public Works Department. It treats approximately 33 million gallons per day (MGD) of wastewater from the City's 300,000+ residents and the communities of Jurupa, Rubidoux, Edgemont, and Highgrove. Treatment includes preliminary, primary, secondary, and tertiary processes followed by disinfection using sodium hypochlorite and dechlorination using sodium bisulfite

Effluent Limitations and Discharge Specifications Section IV.A.1.c. of Order No. R8-2006-0009, NPDES No. CA0105350 specifies the following:

- c. TDS Limitations - The lower of the two total dissolved solids limits specified in 1) or 2), below, is the limit. :
 - 1) The 12-month running average total dissolved solids concentration and mass emission rate shall not exceed 650 mg/l and 216,840 lbs/day¹, or
 - 2) The 12-month average total dissolved solids concentration shall not exceed the 12-month average total dissolved solids concentration in the water supply by more than 250 mg/l.

¹ Derived from 40 mgd x 8.34 x 650 mg/L.

In July 2008, and in some months following, the RWQCP exceeded the 12-month average total dissolved solids concentration in the water supply by more than 250 mg/l (IV.A.1.c.2). The TDS effluent concentration and mass emission rate limits have not been exceeded (IV.A.1.c.1). However, the City has noted that if and as the potable water supplied in the service areas increases in TDS concentration, there is a high likelihood that a violation of the limits in IV. A. 1.c.1 may occur in the near future. TDS increases in the water supply may result from decreasing importation of high TDS quality State Project Water, decreasing reliance on high TDS quality groundwater pumped from the Bunker Hill Basin in light of water rights issues and, in the longer term, increasing reliance on poorer quality groundwater pumped from a part of the Riverside Basin.

The Basin Plan recognizes that strict compliance with TDS limits may be difficult to achieve and it describes the regulatory approach the Regional Board uses to address such situations. The Board incorporates offset provisions in waste discharge requirements whereby Dischargers can implement an approved program to offset TDS discharges in excess of specified TDS limits, provided that the Discharger makes all reasonable efforts to improve the TDS quality of the water supply (and thereby, the wastewater). These offset provisions are normally included in waste discharge requirements where there is the possibility of violation. However, the offset provisions were not included in Order No. R8-2006-0009 based on a review of monitoring data collected during the preceding five year period, which indicated that the City would be able to comply with the TDS effluent limitations.

On July 10, 2009, the City of Riverside requested that Order No. R8-2006-0009, NPDES No. CA0105350, be amended to include the offset provisions that are specified in the Basin Plan. Amendment of Order No. R-2006-0009 to include these provisions is appropriate and consistent with the Basin Plan.

The following shows the proposed changes to Order No. R8-2006-0009. Additions are bold and highlighted. Deletions are stricken-out.

1. Order No. R8-2006-0009, page 10, replace Effluent Limitations and Discharge Specifications IV.A.1.c. with new sub-paragraph IV.A.1.c. as follows:

~~c. TDS Limitations – The lower of the two total dissolved solids limits specified in 1) or 2), below, is the limit.:~~

~~1) The 12-month running average total dissolved solids concentration and mass emission rate shall not exceed 650 mg/l and 216,840 lbs/day², or~~

² Derived from 40 mgd x 8.34 x 650 mg/L.

- ~~2) The 12-month average total dissolved solids concentration shall not exceed the 12-month average total dissolved solids concentration in the water supply by more than 250 mg/L.~~

c. TDS Limitations - The lower of the two total dissolved solids (TDS) limits specified in (1) or (2), below, is the limit.

(1) The 12-month flow weighted running average TDS constituent concentration and mass emission rate shall not exceed 650 mg/L and 216,840 lbs/day³, respectively, unless:

(a) The Discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that:

i. Discharges in excess of the TDS limits are due to the quality of water supply sources utilized in the Discharger's service area, and that all reasonable steps, as agreed upon by the Executive Officer, have been taken to ensure that the best quality supplies are obtained and utilized in the Discharger's service area; or

ii. Discharges in excess of the TDS limits are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the Discharger has taken all steps to optimize chemical additions so as to minimize the increases; and

(b) The Discharger implements a plan, with the approval of the Executive Officer, to offset discharges in excess of the TDS limits. See Section VI.C.6.b, below.

(2) The 12-month flow weighted running average TDS concentration shall not exceed the 12-month flow weighted running average TDS concentration in the water supply by more than 250 mg/L, unless:

(a) The Discharger demonstrates to the satisfaction of the Regional Board's Executive Officer that TDS discharges in excess of the 250 mg/L mineral increment are due solely to chemical additions in the treatment process needed to meet waste discharge requirements, and the Discharger has taken all steps to optimize chemical additions so as to minimize the TDS increases; and

³

Derived from $40 \text{ mgd} \times 8.34 \times 650 \text{ mg/L} = 216,840 \text{ lbs/day}$.

(b) The Discharger implements a plan, with the approval of the Executive Officer, to offset TDS discharges in excess of the 250 mg/L mineral increment. See Section VI.C.6.b, below.

2. Order No. R8-2006-0009, page 25, modify paragraph VI.C.6. as follows:

6. Other Special Provisions – ~~Not Applicable~~

a. TDS Offset Program

By March 31, 2010, the Discharger shall submit a proposed offset program and schedule of implementation for approval by the Regional Board Executive Officer. The proposed offset program shall include a compliance schedule that assures that offsets required to comply with effluent limitations will be implemented (i.e., the requisite offset(s) will be provided) as soon as possible but no later than March 31, 2011. Upon approval, the Discharger shall implement the offset program according to the approved schedule. The offset program shall account for TDS discharges in excess of the numeric limits specified in this Order that occur starting from August 28, 2009 and thereafter. Should any of the proposed offset mechanisms be discontinued or prove to be inadequate to provide requisite offset(s), the Discharger shall, no later than 30 days of discontinuance of any of the proposed offset program or finding of its inadequacy, propose an alternative offset program for approval by the Executive Officer. The Discharger shall implement the alternative offset program upon approval by the Executive Officer.

3. Attachment E, page 20, Section IX. - Other Monitoring Requirements, add new subsection E. as follows:

E. TDS Offset Program Monitoring and Reporting

Every quarter, the Discharger shall report the total salt removal accomplished pursuant to the offset program to demonstrate whether offset requirements are being met. The Discharger shall report quarterly a running balance of salt discharges compared to TDS removal. If offset is not occurring during the quarterly monitoring period, the quarterly report shall so state and identify when the offset will be achieved.

RECOMMENDATION:

Adopt Order No. R8-2009-0052, as presented.

Comments were solicited from the following agencies:

U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) - Doug Eberhardt

U.S. Army District, Los Angeles, Corps of Engineers - Regulatory Branch

U.S. Fish and Wildlife Service, Carlsbad – Christine Medak

State Water Resources Control Board, Office of the Chief Counsel – David Rice

California Department of Public Health, Carpinteria - Jeff Stone

California Department of Public Health, San Diego - Steve Williams

State Department of Water Resources, Glendale – Charles Keene

State Department of Fish and Game, Los Alamitos - Ms. Latonio

Riverside County Environmental Health Department - Sandy Bunchek

Riverside County Flood Control & WCD -- Jason Uhley/Albert Martinez

Santa Ana River Dischargers Association - Ed Filadelfia

Santa Ana Watershed Project Authority – Celeste Cantu/Mark Norton

Orange County Water District - Nira Yamachika

Orange County Coastkeeper - Garry Brown

Lawyers for Clean Water C/c San Francisco Baykeeper

Inland Empire Waterkeeper – Autumn DeWoody

Natural Resources Defense Council - David Beckman